was at the worst when arsenical treatment was begun, but from that time there was marked improvement: the patient was able to leave his bed at the end of five weeks, and the blood was two-and-a-half times richer; when he left the hospital the number of red corpuscles was about four times more than at the beginning of the treatment. In the sixth case, which was less advanced, iron in large doses produced no effect, but after only eight days of treatment by arsenic the patient began to improve, and presented the appearance of health at the end of five weeks, the number of corpuscles being tripled. In the seventh case the result of the arsenical treatment was equally favourable: the health of the patient was remarkably improved after two months and a half of treatment, and the number of red corpuscles was largely augmented. It appears, however, that the patient died abroad, probably from a relapse. Dr. Warfvinge adds that two cases of pernicious anæmia are still under his treatment, and are slowly but uninterruptedly improving.

Dr. Warfvinge remarks that the fact of these three maladies—pernicious anæmia, leukæmia, and pseudo-leukæmia—being equally benefited by the use of arsenic seems to show a certain degree of relationship between them, and in proof of this position he passes in review the principal symptoms presented and the anatomical and pathological changes, particularly insisting on the changes in the blood. Although the three diseases exhibit certain points of difference, there is yet a character common to them all, namely, the diminution of the number of red corpuscles, with a modification of their form and size, the diminution depending less on the decrease in the formation of new corpuscles than on the abnormal destruction of the existing corpuscles. Dr. Warfvinge regards the alteration in the blood as the primary cause of these maladies, and he considers as secondary affections, caused by dyscrasic irritation, not only the changes in the spinal cord, but also the hypertrophy of the lymphatic glands and the spleen, and the lymphatic neoplasms in various situations. The alterations observed in the spinal cord, well known in leukæmia, he has also found in all the cases of pseudo-leukæmia and pernicious anæmia which have been examined after death, and he regards these alterations as common to the three affections, in all of which, moreover, there are anæmia with cachexia, a disposition to hemorrhages, especially of the retina, œdema in various parts and transudations, and fatty degeneration of different organs, especially the heart. The dose of arsenic employed by Dr. Warfvinge was four drops of Fowler's solution given two or thee times a day, and four drops of the same daily when used as an injection.—*Med. Times and Gazette*, Aug. 4, 1883.

SURGERY.

Operative Procedures in Diseases of the Lungs.

Dr. BULL, of Christiania, in a recent paper reports an interesting case bearing on this subject. He also gives a brief review of the literature relating to the operations hitherto performed in diseases of the lungs, together with some observations on the indications connected with the opening of tuberculous cavities, and he draws attention to some new possibilities of limited expiratory expansion of the pectoral wall. The case was that of a man, twenty-nine years old, who entered the State Hospital of Christiania, exhibiting all the signs of advanced pulmonary tuberculosis, such as hectic fever, violent cough, abundant mucopurulent expectoration, emaciation, and anæmia. In the first, and partly in the second left intercostal space, external to the left sternal border, there was observed during the fits of coughing a considerable and clearly limited expansion of the pectoral coverings, which circumstance was not observed in tranquil breathing. This limited expiratory expansion was considered due to a superficial cavity adherent to the thorax, and, perhaps, ulcerated by the pleural adhesion.

Viewing the possibility of the suspected cavity offering an advanced process of ulceration; of the secretion, incompletely expectorated, flowing into the neighbouring bronchi; considering that the fever and the cough were partly relieved by the opening of the cavity externally by means of drainage and disinfection, and that the expiratory expansion in front might perhaps indicate a commencing perforation of the thoracic wall;—taking all these matters into consideration, it was determined, with the consent of the patient, to try the operation. This was accordingly performed, and after the perforation of the thoracic wall the finger could be introduced into a small empty cavity, limited on all sides by smooth walls, and the base of which was formed by a solid elastic tissue. There was no sound of air entering or going out. The day after the operation, during a fit of coughing, there was a sudden discharge by the wound of a liquid like that of expectoration, and this discharge continued abundant, but without relief to the patient, and death ensued in six days. On post-mortem examination the left lung was found to be separated almost entirely from three to four centimeters from the thoracic wall, and there were only a few filiform adhesions with the upper parts. There was fibrinous pleurisy and a little pus in the pleural cavity. At the apex of the lungs there was a large superficial cavity. In other respects in both the lungs there were the usual indications of phthisis.

The differential diagnosis between a cavity and a pneumothorax in cases such as the above cannot be made with certainty, and considering the possibility of mistake, Dr. Bull advises that pulmonary operations should always be performed with the aid of antiseptics, so that if the incision reveals a pneumothorax the wound may then be closed and the operation be regarded only as "diagnostic." Dr. Bull has found in medical literature the records of nineteen cases in which the opening of pulmonary cavities has been undertaken. Five of these, however, are imperfectly reported, or the diagnosis was too doubtful to be of any service. Of the rest of the cases, two were instances of bronchiectatic cavities, one was a case of bronchiectatic cavity and a cavity consecutive to pneumonia, five were cases of pulmonary abscess, three of pulmonary gangrene, two of tuberculosis, and one of echinococcus of the lung. The results of the operations were as follows, viz.: Cases perfectly cured, two; very marked improvement, two; more or less relief, seven; no ill consequences, one; cases made worse, two. As to the tuberculous cavities, experience is almost entirely wanting as to the effect of artificial pulmonary fistulæ, and it belongs to the future to demonstrate whether an operation of that kind is more dangerous in phthisical patients; but even when this proceeding might appear to be without danger, it should not be performed at a too advanced period of the disease.—*Med. Times and Gazette*, July 14, 1883.

Ulcer of the Duodenum.

In a recent number of the *Medizin. Jahrbücher* (1883, hft. i.), is an exhaustive paper on this subject by Dr. CHVOSTEK, of Vienna, in which he brings out the following points in its history:—

1. *Pathogenesis and Etiology.*—The upper portion of the duodenum, in which the perforating ulcer most often occurs, is more directly under the influence of the acid contents of the stomach which play an important part in the pathological anatomy of the affection. The conditions for the origin of duodenal ulcers are